

**HARDOX®**  
WEAR PLATE

# ON-SITE

**QUARRY AND OPEN-PIT  
MINING OPERATIONS**



**SSAB**

# WHAT IS YOUR WEAR CHALLENGE?



Quarrying and open-pit mining operations deliver some of the world's toughest wear challenges. Throughout the production flow, Hardox® wear plate's superior wear resistance against sliding and impact wear translates to extended service life between repairs or replacement of parts and therefore longer maintenance intervals.



## SHOVEL

Shovel buckets can be built with Hardox® 450 or Hardox® 500 Tuf. Hardox® HiTuf is recommended for cutting edges while Hardox® 500 is ideal for bucket cheek plates.



## DUMP POCKET

For lining of dump pockets at the discharge site, Hardox® 500 Tuf, Hardox® 550 or Hardox® 600 are suitable grades to reach the desired wear resistance.



## BULLDOZER

Hardox® 450 and Hardox® 500 Tuf grades are ideal for premium blade structures. Hardox® 500 and Hardox® 550 are suitable for wear liners and Hardox® HiTuf for rippers.



## HOPPER AND FEEDER

Hoppers and feeders are exposed to heavy sliding wear and impact, which makes Hardox® 500 Tuf, Hardox® 550 or Hardox® 600 recommended grades.



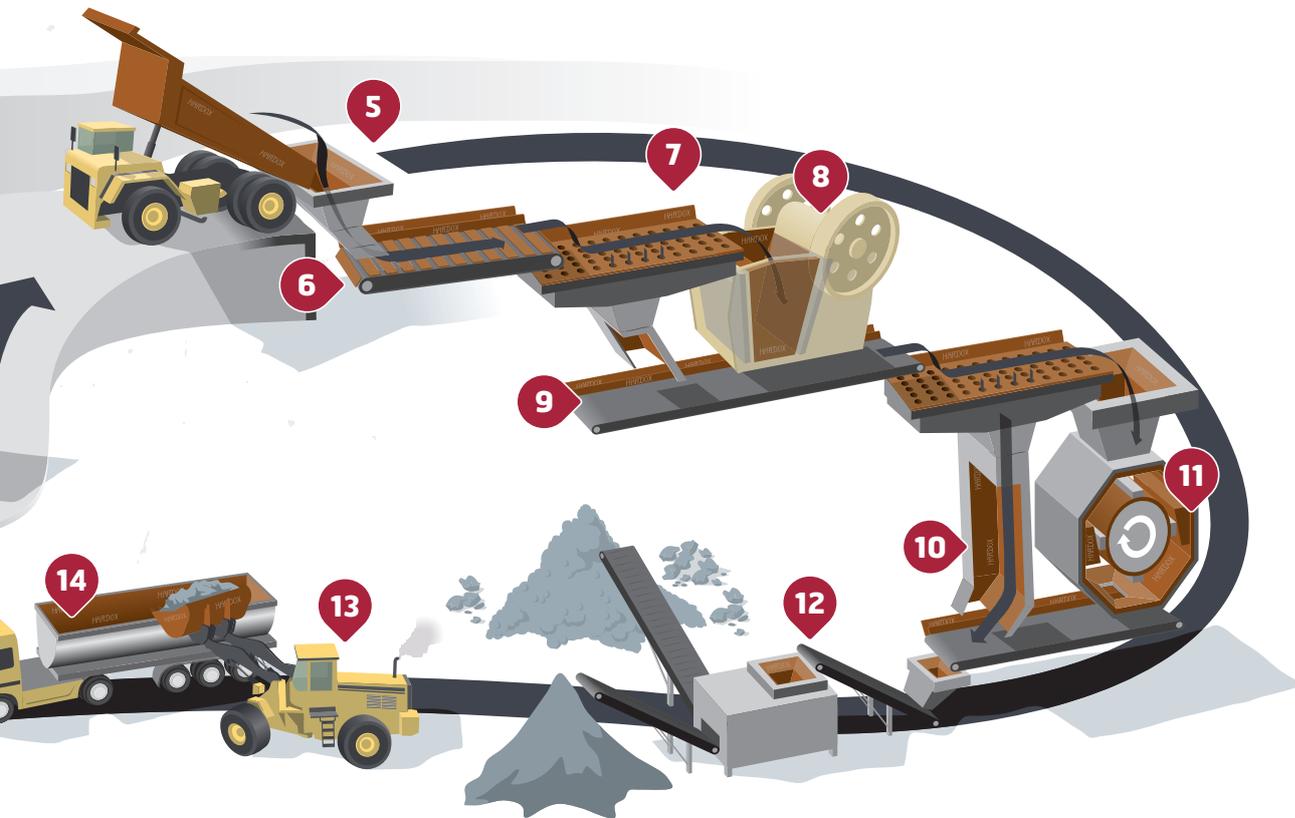
## DUMP BODY

The hardness and exceptional toughness of Hardox® 500 Tuf lets you design low-weight bodies with the wear resistance of much heavier structures.



## CRUSHER

Crushing rocks made of granite and other highly abrasive materials involves a combination of sliding and impact wear, calling for hard and tough Hardox® 500 Tuf, Hardox® 550 or Hardox® 600.



## HARDOX® APPLICATIONS IN QUARRY AND OPEN-PIT MINING

1. Shovel
2. Bulldozer
3. Dump truck
4. Excavator
5. Dump pocket
6. Feeder
7. Screener
8. Jaw crusher
9. Conveyor
10. Transfer chute
11. Hammer crusher
12. Final screening
13. Loader
14. Tipper/dump body



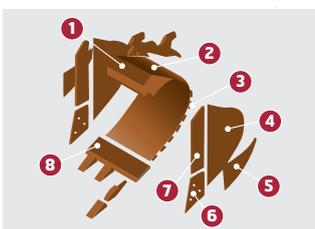
### TRANSFER CHUTE

Every change of transfer direction needs a chute with liner plates subjected to intensive wear. The chutes can be made of Hardox® 500 Tuf, Hardox® 550 or Hardox® 600.



### TIPPER BODY

Weight-optimized tipper bodies are without stiffeners on the sides. Utilizing Hardox® 500 Tuf will give maximum payload capacity, service life and fuel efficiency for every loaded tonne.



### BUCKET

Buckets are subjected to sliding and impact wear as well as high loads. Hardox® 500 Tuf in combination with Hardox® 500, Hardox® 550 and Hardox® 600 make it possible to optimize loading performance and service life.

1. Beam: Hardox® 500 Tuf
2. Shell: Hardox® 500 Tuf
3. Wear bar: Hardox® 500 Tuf/ Hardox® 550/ Hardox® 600
4. Side sheet: Hardox® 500 Tuf
5. Cheek plate: Hardox® 500 Tuf/ Hardox® 550/ Hardox® 600
6. Side corner: Hardox® 500 Tuf/ Hardox® 550
7. Side cutter: Hardox® 500 Tuf
8. Cutting edge: Hardox® 500 Tuf/ Hardox® 500

## WEAR: THE INSIDE STORY

Your choice of wear plate has consequences for your business. Hardox® wear steel maximizes the wear performance of your equipment and machines, reduces workshop lead times and increases the overall productivity of your operations.

Thanks to the consistent properties of Hardox steel, you can always rely on its high performance. That also makes its service life highly predictable, allowing you to optimize your maintenance planning.

With its combination of high hardness, high strength, and toughness, Hardox® can be used in a variety of applications, including loading, transport and crushing in quarrying and mining.

What's the secret behind Hardox®? It starts early in the production with state-of-the-art steelmaking and a unique hardening and quenching process, resulting in wear plates with outstanding hardness, toughness, and workshop friendliness.

### SUPPORT AT YOUR SERVICE

In addition to our steel products, SSAB provides you with technical support from SSAB Tech Support and SSAB Knowledge Service Center. Our technical support can help with everything from optimizing your product design to hands-on workshop issues. Our Technical Development Managers and material specialists have decades of experience in solving wear challenges.

SSAB is a Nordic and US-based steel company. SSAB offers value added products and services developed in close cooperation with its customers to create a stronger, lighter and more sustainable world. SSAB has employees in over 50 countries. SSAB has production facilities in Sweden, Finland and the US. SSAB is listed on Nasdaq Stockholm and has a secondary listing on Nasdaq Helsinki. [www.ssab.com](http://www.ssab.com)

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### DIFFERENT TYPES OF WEAR

Wear comes in different forms, and each has a different impact on the service life of your application. The most common wear types are sliding wear and impact wear. When abrasive particles are trapped in a narrow gap between two steel surfaces it causes squeezing wear. Each type of rock is composed of a unique set of minerals which contribute to the specific type of abrasive wear damage.

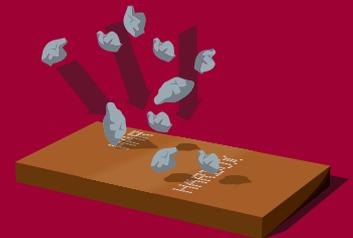
### HARDOX® WEARCALC

Hardox® WearCalc app is a powerful prediction tool that calculates wear and helps you optimize your choice of wear steel. It allows you to predict relative wear life and compare different wear solutions. Whatever your application and wear situation, Hardox® is your ticket to outstanding wear performance.



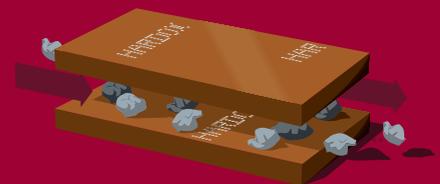
#### SLIDING WEAR

Hardox® steel has great resistance to sliding wear since it's difficult for abrasive materials to cut into the steel's hard surface.



#### IMPACT WEAR

Hardox® is a wear steel with high toughness, which makes it stand up to impact from rocks and other heavy objects striking the steel.



#### SQUEEZING WEAR

Squeezing wear is a less common type of wear but will benefit from the hardness of Hardox® the same way as for sliding and impact wear.